

Re: Resolution switching on a monitor

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"Mjolinor" <mjolinor@hotmail.com> wrote in message
news:PquPc.694\$IE4.510@newsfe2-gui.ntli.net...

> *The scan frequencies do not necessarily change at all when you change the
> resolution.*

Remember, we're talking about CRT monitors here, not LCD; it is very rare for the scan frequencies NOT to change when changing the pixel format. (There are a few of the original "VGA" modes, for instance, that all use the same horizontal rate, but differ in the vertical.)

Changing the "resolution" (pixel format) and not changing either the horizontal or vertical rates can only come by packing more (or fewer) pixels into a given scan line (since you can't possibly have changed the lines per frame if neither scan rate changes, except trivially by altering the blanking period). But since a CRT monitor doesn't know anything about "pixels" in the first place, there's no real change from the monitor's perspective.

> *What happens is that the signal as seen on the VGA plug has (for
> example) 1024 discrete values between 2 consecutive line syncs as opposed
to
> 800 discrete values and 768 line syncs between frame syncs as opposed to
600
> (assuming non interlaced).*

First, there aren't "1024" or "800" discrete values on the VGA video in any case; the analog VGA interface provides absolutely no information that permits "pixels" to be clearly distinguished. It carries a continuous analog video signal. (Which is not to say that this video can't be sampled at what you BELIEVE are the correct "pixel" times – analog-input LCD monitors do exactly that – but there is nothing on the interface itself that identifies the individual pixels for you.) Thought experiment – try showing one line of video from a VGA interface, running 1024 x 768 @ 60 Hz, on an oscilloscope – and point to pixel #483 on that line. This is especially fun when the image in question is a full white raster...:-)

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Second, and more importantly – if you've changed the number of line syncs between the number of frame syncs (i.e., changing the H sync rate vs. the V sync rate), then you HAVE changed the line (horizontal scan) rate by definition (assuming the same frame rate), right?

> *What you drive it into is irrelevant.*

I have absolutely no idea what you mean by this. But since a CRT monitor (ex